

AFCEA TECHNET

19.MAY.05



The Challenge of Securing an IP Based Network

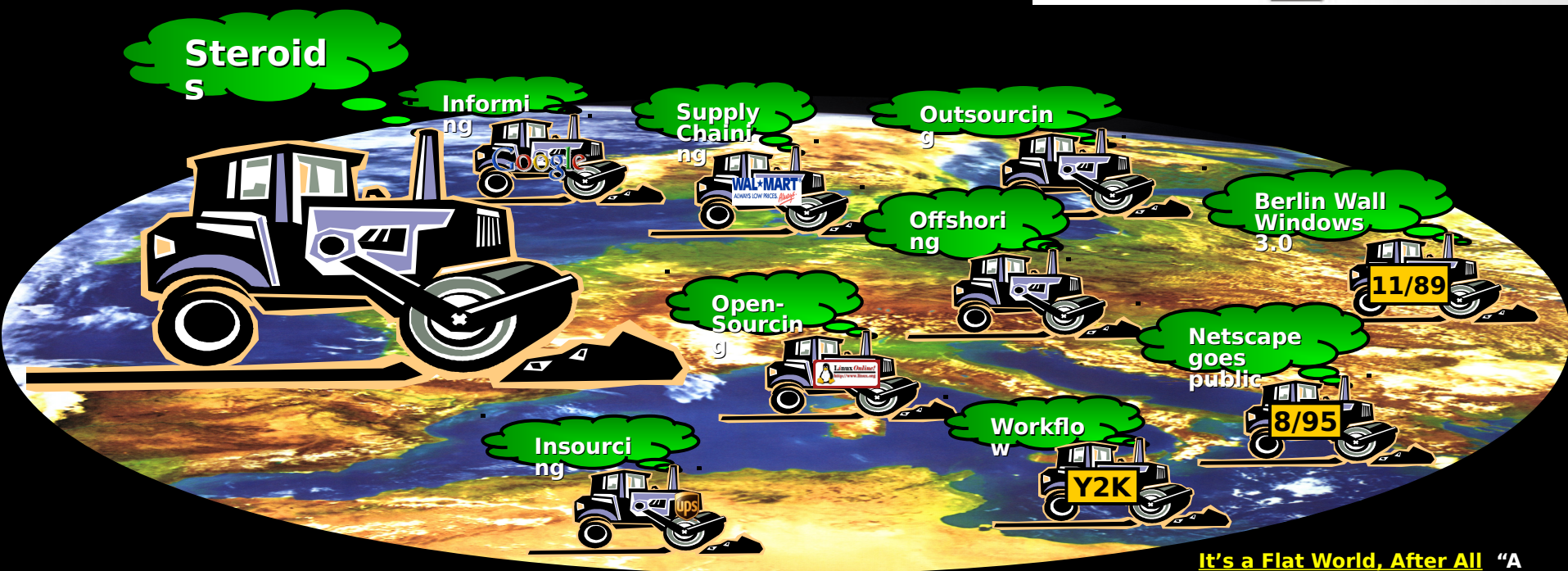
LTC Steven W. Boutelle
Chief Information Officer/G-6

Relevant and Ready Landpower in Service to the Nation





The World is Flat and IP-Centric

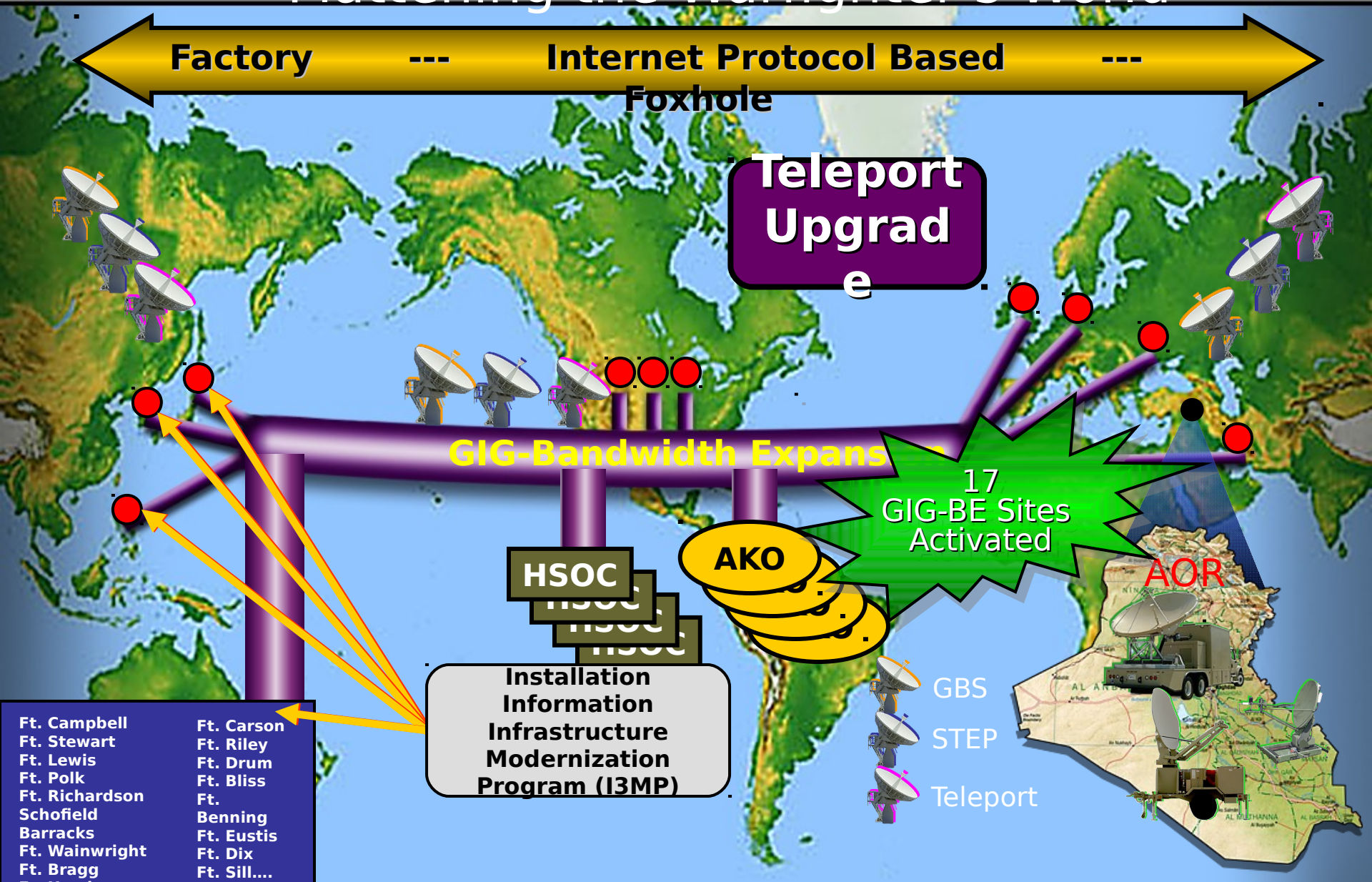


It's a Flat World, After All "A tale of technology and geo-economics that is fundamentally reshaping our



Military Global Information Grid (GIG)

Flattening the Warfighter's World





Converged IP





Voice over IP



PSTN could reach its end-of-life in 10 to 15 years¹

...killing off traditional telephony..50% of small to mid-sized enterprises to rely on VoIP by 2008²

DISA to migrate voice traffic from MCI to DOD private IP network - GIG-BE replace leased lines⁴

North American VoIP service revenues³

- 2004: \$1.3B
- 2009: \$19.9B (1,431% increase)



"It won't be about distance and how long you talk, but how you create value around voice communication. The voice will be free; it's what you enable customers to do around it that will differentiate companies"

-Mike Volpi, Cisco's senior VP for routing technology

BROADVOICE™
TALK THIS WAY

Verizon VoiceWing
Broadband Phone Service

AT&T CallVantage™
Phone service for broadband

VONAGE™
THE BROADBAND PHONE COMPANY™

lingo
The talk of broadband

voiceglo

Packet8
Communication for the Broadband Generation

BROADVOX™ DIRECT

Comcast

QUINTUM
TECHNOLOGIES, INC.

VoicePulse
Broadband Phone Service

SunRocket

1. NASCIO Report dtd 4 May 2005: VoIP and IP Telephony: Planning for Convergence in State Government

2. Info-Tech Research Group (VoIP News)

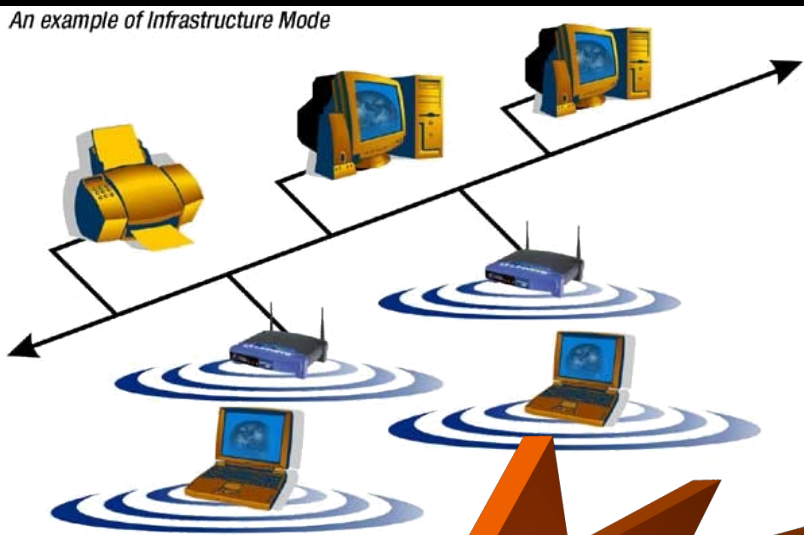
3. Infonetics Research (VoIP News)



Wireless Ethernet (802.11)



An example of Infrastructure Mode



**Must
secure
NOW!**

- 802.16e (WiMax: 2 - 6 GHz) and 802.20 (> 3.5 GHz) - Metropolitan Area Wireless Networks/Mobility: provide mobile wireless broadband access (DSL and Cable capability) and extend coverage area to 30 and 9.3 miles respectively.
- 802.21 - Media Independent Handover Service: Roam

Standard	Capability	Ratification Date
802.11	2 Mbps (2.4 GHz)	Approved
802.11b	11 Mbps (2.4 GHz)	Approved
802.11a	54 Mbps (5 GHz)	Approved
802.11g	54 Mbps (2.4 GHz)	Approved
802.11e	Quality of Service	Late 2005
802.11r	Fast Roaming	Late 2006 /Early 2007
802.11n	Extended Range Increased Bandwidth	Late 2005
802.11k	Load Balancing /Distribution	Late 2005
802.11i	WiFi Security	Summer 2004
802.11h	Dynamic Frequency	TBD

An example of Ad-Hoc Mode

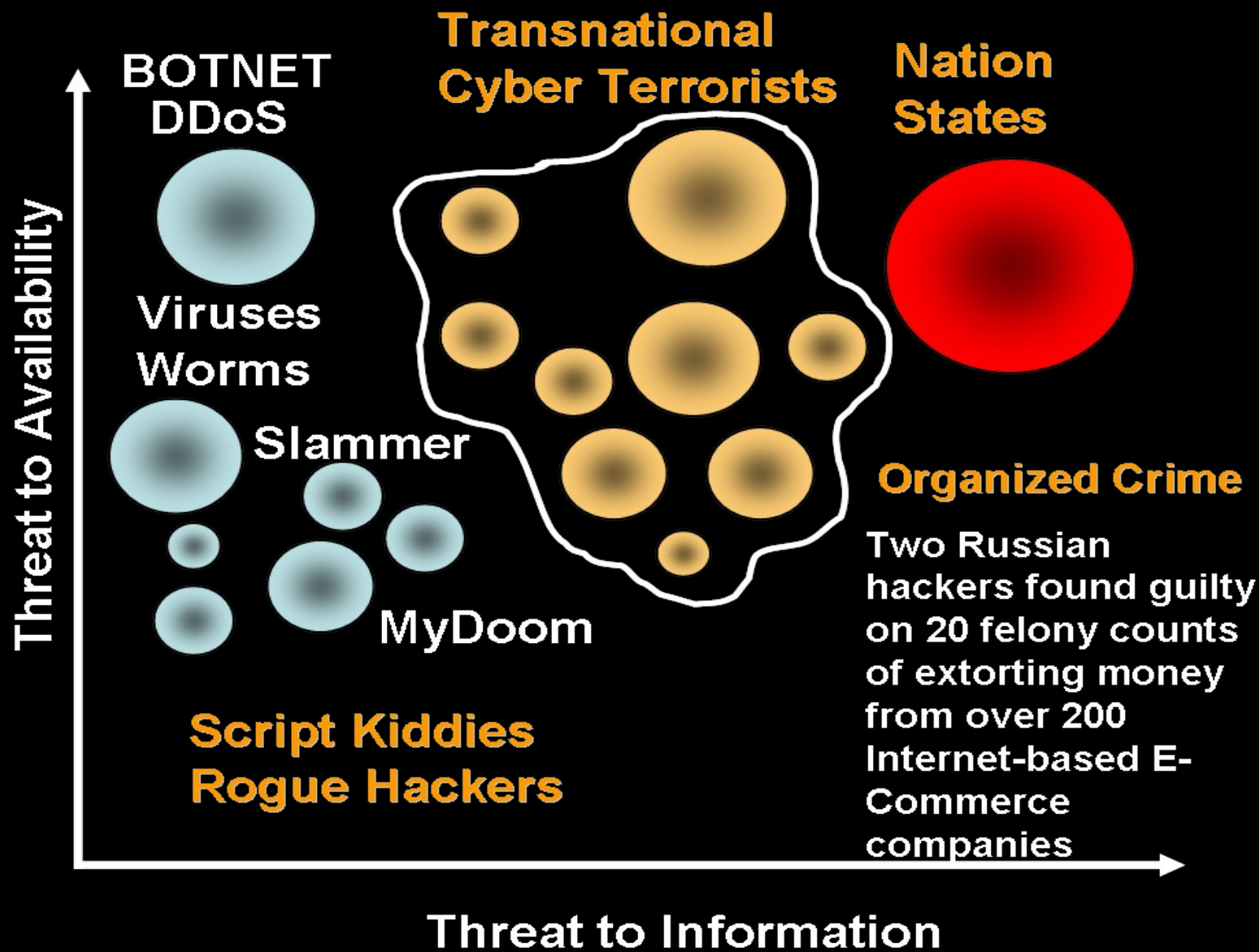




We Are Under Cyber Attack!



Cyber Intelligence Problem Sets





Take Away's



Technology and geoeconomics is changing our livesMassive investment in technology

...created a platform where intellectual work and capital could be delivered from anywhere



“The playing field is being leveled”



We are Flattening the Warfighter's world!

....providing a joint non-terrestrial standards based network

....connecting the warfighter - foxhole to factory

....providing seamless enterprise solutions



Achieving Service, Joint & Coalition Interoperability



Information Assurance

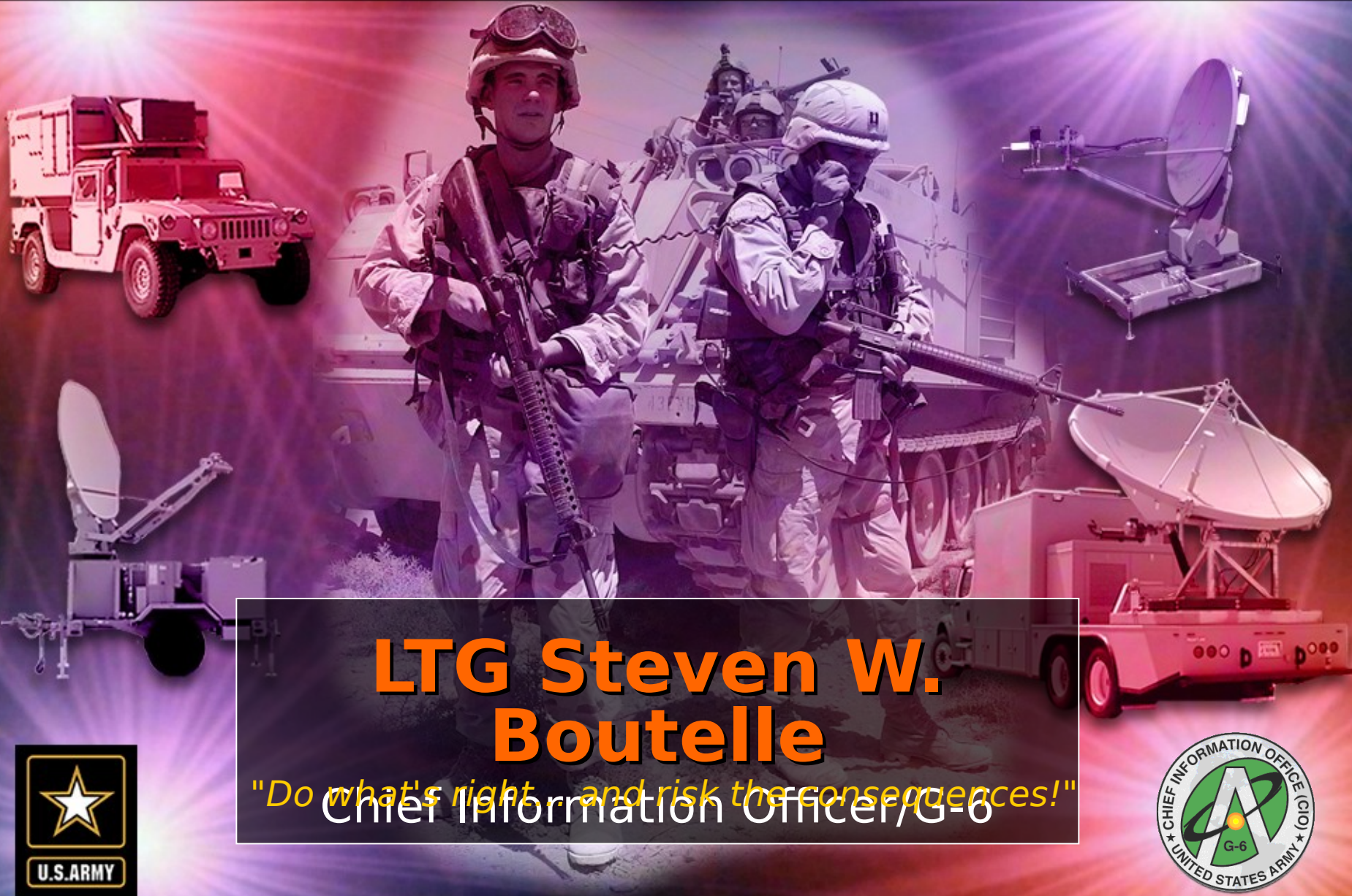
...Cyber Defense is a Force Protection Issue



We need industry's help to achieve



AFCEA TechNet



**LTG Steven W.
Boutelle**

"Do what's right... and risk the consequences!"
Chief Information Officer/G-6

